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TITLE: Ferroelectric memory and recording device using the same

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Detailed Description Text - DETX (5):

FIG. 3 shows the relationships between the charge amount and the applied voltage for the saturation polarization amount P_s and the residual polarization amount P_r . The difference between the saturation polarization amount P_s and the residual polarization amount P_r is called back switching. V_c' is a coercive voltage obtained from the hysteresis characteristics, and V_c is a coercive voltage obtained from the P_r - V characteristic. As in FIG. 3, V_c' and V_c are not necessarily equal. (I) indicates a region of a polarized state in which polarization is set in a first direction by a first pulse V_e (to be described later). When a second pulse V_w (to be described later) is applied in this state (I), the state (I) transits to a region (III) in which a polarized state almost inverted in a second direction is obtained. In this region, no polarization inversion occurs, i.e., the polarization does not change. (II) indicates a region of partial polarization. Partial polarization is a polarized state having a mixture of the polarization in the first direction and the polarization in the second direction (FIGS. 5A and 5B).